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MARCH 12, 1954

Cooperative ECONOMIC INSECT REPORT

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PLANT PEST CONTROL BRANCH

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

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Plant Pest Control Branch
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Volume 4 March 12, 1954 No. 10

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

SMALL GRAIN PEST conditions in Texas, New Mexico, Oklahoma and Kansas to March 1, 1954. (page 191).

BEET LEAFHOPPER conditions in Utah, western Colorado, southern Nevada, southeastern California and central Arizona - 1954. (page 199).

BOLL WEEVIL survival counts, Tallulah, Louisiana. (page 200).

A new SCALE INSECT in Florida. (page 201).

HORN FLY heavy in areas of Texas. Increasing in Gadsden County, Florida. (page 201).

Summary of INSECT CONDITIONS - 1953 - Oregon (page 203), North Carolina (page 204), Georgia (page 205).

Some of the more IMPORTANT INSECTS for 1953. Twenty-one State Clearing offices have responded to date to the request for lists of the more important insects in 1953. Additional lists will be carried as received. (see last page).

SEED-CORN MAGGOT heavy in Fulton County, Georgia. First eggs of season on spinach in Oklahoma. (page 200).

A few CUTWORM and ARMYWORM moths at Charleston, S. C. (page 197).

* *

WEATHER FOR WEEK ENDING MARCH 9, 1954

Winter-like conditions in the South featured the weather of the week. Frost and freezing in the Southeast to the Florida Everglades on the 2nd and throughout the South, except in most immediate coastal areas, on the 4th and 5th damaged fruit in some southern areas and truck in Florida. Snowfall was widespread and some accumulations were reported on the Gulf Coast where measureable amounts are rare even in midwinter. Average temperatures for the week were 10° to 15° lower than those of the previous week in virtually all areas, and 10° to 12° below normal in the South. Temperatures for the week averaged about normal west of the Continental Divide, and a few degrees above normal in New England and a few adjacent areas.

The cold weather began in the North Central Interior on March 1 and by the 4th cold air covered the entire United States. On the morning of the 3rd subzero minima were recorded in eastern Colorado and western Kansas and by the morning of the 5th freezing was reported by all stations except those along the West Coast and in the extreme South. A few of the lowest temperatures in northern areas were -22° at Bemidji, Minn., and -13° at Solon Springs, Wis., on the 5th, and -3° at Cadillac, Mich., and 8° at Montrose, Pa., on the 6th.

Precipitation was generally very light, with totals exceeding one-half inch limited to the north Pacific Coast, southern Florida, the central Gulf Coast, small sections in the lower Great Lakes region, eastern New York, New England, New Jersey, and a few adjacent areas. Topsoil mositure remains adequate in the East, most of the Mississippi Valley, and parts of the eastern Great Plains, but continues low in the western Plains and Southwest.

General snowfall over north central areas on the 3rd and 4th was locally heavy in Michigan and parts of Ohio and Pennsylvania. Heavy drifting in southern Michigan and northern Ohio, where drifts of 6 to 7 feet high were reported, blocked roads and forced many schools to close. (Summary Supplied by U.S. Weather Bureau).

Reports in this issue are for the week ending March 5 unless otherwise designated.

CEREAL AND FORAGE INSECTS

Small Grain Pest 1/ Conditions in Texas, New Mexico Oklahoma, and Kansas to March 1, 1954 2/

Compiled by R. G. Dahms

Small Grain Conditions

In most sections of the wheat producing areas of Kansas, New Mexico, Oklahoma, and Texas, precipitation was sufficient during the fall of 1953 to produce a satisfactory growth of small grains, and in many fields fall and winter grazing was available. However, the precipitation since December 15 has been far below normal. Some beneficial moisture was received during the week of February 15 east of a line running from Norton to Meade County, Kansas, in central and eastern Oklahoma, and in north Texas; but more moisture is needed. Generally, the present condition of the winter wheat in New Mexico, the Oklahoma Panhandle, and western Kansas is poor, but is better than at this time in 1953. In the Texas Panhandle and in western Oklahoma, conditions vary from fair to good, but this area needs moisture very badly. In north Texas, central and eastern Oklahoma, and central and eastern Kansas, small grains look good, but more rain is needed. Severe wind erosion has occurred over western Kansas, the Texas Panhandle, New Mexico, and western Oklahoma. Young wheat seeded in November and December was most adversely affected. In much of this area late-seeded fields have been worked (chiseled) in an effort to reduce the wind erosion. This area is in a critical condition and will continue to blow unless rains are received.

1/ Except hessian fly.

2/ Entomology Research Branch and Agricultural Experiment Stations of Texas, New Mexico, Oklahoma, and Kansas, cooperating.

Small Grain Pest Conditions

Summary: No general widespread small grain insect outbreak has occurred or is in sight for the four-state area. Some locally heavy infestations of BROWN WHEAT MITE (Petrobia latens) may develop during the next six weeks in the Texas Panhandle, western Oklahoma, Oklahoma Panhandle, and southwestern Kansas. A few fields in all four states have been found that appear to have a threatening infestation of CUTWORMS, but the infestation is not general. The most severe GREENBUG infestation appears to be localized in Payne County, Oklahoma. Several fields throughout Oklahoma have very heavy populations of ENGLISH GRAIN APHID and APPLE GRAIN APHID, but these insects usually do not cause severe damage. However, if the English grain aphid persists until April and May and infests the developing heads, additional damage may occur. A WHEAT CURL MITE (Aceria tulipae) has been found in a high percentage of wheat samples that were brought into the greenhouse from the northern half of Kansas during the fall of 1953.

GREENBUG (Toxoptera graminum) - KANSAS - Present in small numbers in northcentral area during the fall, and a few as far southwest as Garden City. However, no greenbugs found in 162 fields examined in southwestern Kansas during February. NEW MEXICO - Greenbugs were not detected during December, January, or February when a total of 57 fields were surveyed. OKLAHOMA - Twenty-five central and western counties were surveyed for greenbugs during February. Population was threatening (from 50-100 per linear foot of row) in a few fields in Payne County. Light infestations (from 10-50) in a few fields in Logan, Pawnee, and Okfuskee Counties. In seven counties, noneconomical infestations (1-10) were found, and no greenbugs were found in the fields examined in the other 14 counties. Some parasites and predators were found during warm days in February. The survey indicated that the infestation is greater than at the same time in 1953, about the same or slightly less than in 1952, and much less than in 1950 and 1951. TEXAS - Greenbugs were found rather generally distributed in the northern Texas Panhandle during the winter. Seventy-nine fields were visited in 22 counties during last half of January and greenbugs were found in 16. In the infested areas, greenbugs were found in very small numbers, mostly in rank wheat or in large volunteer clumps scattered over the fields. In December and January the numbers of predators always equaled or exceeded that of greenbugs, while this situation was found sharply reversed in the

February 15 survey in the Dawn, Texas, area. Lady beetles populations have generally declined since November, and nabiids are apparently the most active predators.

OTHER APHIDS - KANSAS - No ENGLISH GRAIN APHIDS (Macrosiphum granarium) or apple grain aphids (Rhopalosiphum prunifoliae) were found in 132 fields examined in southwestern Kansas during February. OKLAHOMA - English grain aphid infestation has been greater than normal throughout winter. Fields seeded very early (before September 15) had heaviest infestation. In some cases infestation ranged up to 100 per foot in January. Infestation appears to center around Kingfisher County, but fields have also been found with populations above 50 per foot in Logan, Canadian, Muskogee, Jackson, Tillman, and Payne Counties. During February there was a considerable migration of English grain aphid from these early fields into later-seeded fields and even early-spring-seeded oats. In several cases English grain aphid has been mistakenly identified as greenbug. As usual, apple grain aphid has been found in many fields throughout State. In a few fields in Canadian and Kingfisher Counties, infestations have ranged up to 100 per foot. Heavy infestations of the corn leaf aphid (Rhopalosiphum maidis) were found in some early seeded barley fields in Blaine and Comanche Counties in December. TEXAS Light populations of the English grain aphid, apple grain aphid, and corn leaf aphid were found in many fields in the Texas Panhandle during January and February.

ARMY CUTWORM (Chorizagrotis auxiliaris) - KANSAS - A few found in McPherson County, February 24. An occasional cutworm was found in several southwestern counties during last week in February. Only very light damage around borders. CUTWORMS were in third and fourth instars. NEW MEXICO - A threatening population of army cutworms found in two fields during January, but were collected only in numbers of less than one per square foot in 12 fields surveyed in February. OKLAHOMA - The infestation in Oklahoma appears to be very light. Occasional cutworms were found during last week in February in small grain fields in Texas County, but no general damage. Few small grain fields east of Guymon on Highway 3 and north of Guymon some ten or twelve miles show generally two to three cutworms per foot in borders where slight evidence of feeding can be readily found on wheat in the borders. Most cutworms found in third or fourth instars. TEXAS - Cutworms were found in increasing numbers during February, but populations did not exceed two to three per square foot in fields examined. Most infestations were confined to fence row areas. Larvae were about half to two-thirds grown, on February 26, in Oldham County.

PALE WESTERN CUTWORM (*Agrotis orthogonia*) - NEW MEXICO - Collected in 7 of 12 fields surveyed in the Clovis area in February, ranging from less than one per foot of drill row up to three per foot of drill row. Bare spots were apparent in more heavily infested fields.

A SPIDER MITE (*Paratetranychus pratensis*) - NEW MEXICO - Numbers have become progressively less since October, 1953, when found in 12 of 16 fields and reached numbers as high as 18 mites per plant. These mites were collected from 6 of 25 samples in December, 3 of 20 samples in January, and in 1 of 12 samples in February. TEXAS - A light infestation found in one field in Parmer County during February.

A WHEAT CURL MITE (*Aceria tulipae*) - KANSAS - This mite, an important carrier of wheat streak-mosaic, was found in fall-seeded wheat and volunteer wheat in central and north central Kansas during the winter of 1953-54. Also found in volunteer, but not seeded, wheat in southwestern Kansas (Finney, Stanton, Grant, Greeley, and Scott Counties) on February 23. NEW MEXICO - Wheat curl mites were present on wheat at the Plains Substation at Clovis, but did not appear to be widespread in New Mexico. OKLAHOMA - Wheat curl mites found on wheat in Payne County in November, but they apparently are not widely distributed in State. None found in Oklahoma Panhandle during a survey last week in February. TEXAS - Wheat curl mites found during the fall of 1953 on volunteer wheat in the Texas Panhandle, but very difficult to find March 1. No mites located during a survey through western and northern part of the panhandle last week in February.

BROWN WHEAT MITE (*Petrobia latens*) - KANSAS - Populations relatively low in most southwestern counties from February 13 to 17. Average population per 10 linear feet in 136 fields surveyed in 18 counties of southwestern Kansas was 28. Highest population was in Meade County, where 7 fields averaged 335 mites per 10 linear feet. NEW MEXICO - Brown wheat mites found in about half of the 32 fields surveyed during January and February. The maximum number recorded was 4.5 mites per plant, determined by direct count. OKLAHOMA - Brown wheat mite was found in the following counties during February: Payne, Blaine, Washita, Greer, Kiowa, Harmon, Jackson, Tillman, Garfield, Grant, Alfalfa, Major, Beaver, and Texas. In general, infestation was less than one per linear foot of row. Populations in 41 fields examined in two counties in the panhandle (Texas and Beaver) during February, averaged 19 mites per 10 linear feet. TEXAS - This mite was present during February in small numbers in most fields examined. As usual, greatest numbers are associated with trashy or stubble mulched fields. A few fields in Parmer, Deaf Smith, Sherman, and Hansford Counties had populations up to 20 per linear foot, and in one field near Gruver the population was approximately 100 per foot. A light infestation was found in the Dallas-Fort Worth area in February.

A WINTER GRAIN MITE (Penthaleus major) - OKLAHOMA - This mite was found in small numbers in several counties during the winter, including Mayes and Cherokee in the east, Garfield, Kingfisher, Major, Grant, and Alfalfa in central and north central Oklahoma, and Tillman in the southwest. TEXAS - The winter grain mite populations developed quite early in the fall of 1952 in north central and north Texas (Waco to Denton area). A few mites were observed on volunteer oats as early as November 3, and by end of November, heavy infestations found in many fields. However, feeding and damage were reduced considerably by low temperatures during the last half of December. Some damage occurred in January and February, due to second-generation mites.

* *

MORMON CRICKET (Anabrus simplex) - NEVADA - Have hatched in several areas. Mild, open winter in western Nevada. (Schweis).

CLOVER SEED CHALCID (Bruchophagus gibbus) - ARIZONA - Developing larvae and pupae in alfalfa seed along borders and ditches in Yuma area. (Ariz. Coop. Rept.).

ALFALFA WEEVIL (Hypera postica) - NEVADA - Requests for assistance in control recently received. (Schweis).

CLOVER MITE (Bryobia praetiosa) - ARIZONA - Still abundant in Yuma area. Scattered damage to alfalfa. (Ariz. Coop. Rept.).

LEAFHOPPERS - ARIZONA - Three to 500 per 100 sweeps on alfalfa in Yuma area. (Ariz. Coop. Rept.).

PEA APHID (*Macrosiphum pisi*) - NEW MEXICO - Considerable injury fall seeded and one-year-old alfalfa in Carlsbad area of Eddy County. Scattered infestation in Dona Ana County causing concern. Also appearing in certain areas of Chaves, Lea and Roosevelt Counties. Heavy populations of predators in some areas. (Dobson, Feb. 27).

A FLOWER THRIPS (*Frankliniella occidentalis*) - ARIZONA - Infesting much of alfalfa in green bud stage in Yuma area. (Ariz. Coop. Rept.).

APHIDS - TEXAS - Medium to heavy infestation (prob. *Aphis medicaginis*) on vetch and rye in part of McLennan County. (Cowan, J. W. Davis, Tife). ARIZONA - Severe in some barley fields in Maricopa and Pinal Counties. (Ariz. Coop. Rept.).

A SPIDER MITE (*Tetranychina apicalis*) - LOUISIANA - Damaging infestation on white clover in LaFourches and East Feliciana Parishes. (Cockerham).

LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) - SOUTH CAROLINA - Occurring on crimson clover in Greenwood County, Feb. 19. (Johnson).

GREENBUG (*Toxoptera graminum*) - KANSAS - None found in wheat fields examined in Washington, Clay, Cloud, Ottawa, Jewell, Geary and Riley Counties. (Matthew). OKLAHOMA - Spraying for greenbug underway at Marshall, Feb. 27. (Rogers). Populations increasing slightly in southern Payne County. Up to 100 per linear foot. Some spraying. (Woods).

WHITE GRUBS - OKLAHOMA - Fairly heavy infestations in southwestern counties. (Rogers, Feb. 27).

FALSE CHINCH BUG (*Nysius ericae*) - OKLAHOMA - Large numbers on rank winter oats in Mayes and Wagoner Counties. (Stiles).

BROWN WHEAT MITE (*Petrobia latens*) - TEXAS - Medium infestation on wheat in Stratford and Gruver areas. (Daniels).

PALE WESTERN CUTWORM (*Agrotis orthogonia*) - NEW MEXICO - Appearing in fairly large numbers in wheat fields in Ragland area of Quay County. Counts up to 4 larvae per square foot in scattered fields. (Dobson).

ARMY CUTWORM (*Chorizagrotis auxiliaris*) - KANSAS - Reported from several central counties. Two to six larvae per square foot in fields surveyed in Jewell, Cloud, Ottawa, Clay, Riley and Geary Counties. Leaf damage to young alfalfa noted. Few larvae found feeding in old stands of alfalfa or on wheat. (Matthew).

CUTWORMS AND ARMYWORMS - SOUTH CAROLINA - A few moths taken in light trap at Charleston during past three weeks. (Cuthbert). LOUISIANA - *Feltia subterranea*, *Agrotis ypsilon*, *Peridroma margaritosa*, and *Pseudaletia unipuncta* moths being taken in small numbers from light traps at Baton Rouge and in Tensas Parish. Larval populations of *P. margaritosa* being affected by disease in St. Landry Parish. (Burns). TEXAS - Medium infestation of cutworms on clover near Port Lavaca and Austwell. Controls being used in some cases. (Cassidy). OKLAHOMA - Some spraying for cutworms west of Enid, Feb. 27. Spotted infestation in southwestern counties. (Rogers).

SOUTHWESTERN CORN BORER (*Diatraea grandiosella*) - KANSAS - Sample of corn stalks from field in northeastern Ottawa County showed survival of 13 percent of larvae. (Matthew).

SEED-CORN MAGGOT (*Hylemya cilicrura*) - MISSISSIPPI - Feeding on small cowpea plants in Harrison County, Feb. 27. (McGehee).

FRUIT INSECTS

PEACH TREE BORER (*Sanninoidea exitiosa*) - GEORGIA - Infestation generally has increased in peach belt. Believed due to ineffectiveness of sprays. (Snapp). TEXAS - Heavy local infestation of peach trees near Lindale. (Randolph, King).

LESSER PEACH TREE BORER (*Synanthedon pictipes*) - GEORGIA - Moderate infestation continues in Fort Valley area. (Snapp). TEXAS - Heavy local infestation on peach trees near Lindale. (Randolph, King).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Still present in most citrus groves in Yuma area. (Ariz. Coop. Rept.).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - TEXAS - Light infestation on peach and plum trees near Lindale. (Randolph, King).

TRUCK CROP INSECTS

APHIDS - VIRGINIA - Cabbage aphids building up on overwintering crucifers in Norfolk area. Some green peach aphid (Myzus persicae) also noted. (Brubaker, Greenwood, Hofmaster). SOUTH CAROLINA- Cabbage aphid (Brevicoryne brassicae) infestations decreasing in Charleston area but moderate to heavy in a few fields. Green peach aphid less abundant than usual on spinach. Insect enemies very active. Pea aphid (Macrosiphum pisi) light on garden peas and Austrian winter-pea cover crops. (Cuthbert). OKLAHOMA - Green peach aphid observed on spinach Feb. 23. Ten to twenty-five per leaf. (Walton, Kantack). FLORIDA - Green peach aphid nymphs and adults found on yellow dock at Quincy. Average of 15 per plant. Practically all nymphs. (May).

ONION THRIPS (Thrips tabaci) - SOUTH CAROLINA - Very light infestation in most onion plantings in Charleston County. (Cuthbert). TEXAS - Medium to heavy widespread infestation on onions in lower Valley. (Davis, Griffith).

FALSE CHINCH BUG (Nysius ericae) - LOUISIANA - Severely damaging five acres of turnips in LaFourche Parish. (Cockerham). TEXAS - Infestation continues in lower Valley. (Griffith). Medium on turnips near Livingston. (O'Brien). Migrating from natural hosts to suitable green plants because of dry weather. (Davis).

DIAMONDBACK MOTH (Plutella maculipennis) - SOUTH CAROLINA - Light to moderate in two cabbage plantings in Charleston County. Insect has been relatively scarce in this area in recent years. (Cuthbert).

WEEVILS ON ONIONS - TEXAS - Medium to heavy local infestation in Wilson County. Some fields 25-30 percent plants infested. (Davis).

Beet Leafhopper Conditions in Utah, Western Colorado, Southern Nevada, Southeastern California and Central Arizona - 1944

The beet leafhopper spring movement from the southern desert breeding areas to the cultivated districts of north and central Utah and western Colorado is expected to be light. The local movement is expected to be light in north and central Utah and in western Colorado. The movement to southern Utah, southern Nevada, southeastern California and central Arizona is expected to be light. The overwintering population in the southern breeding area is considered to be approximately one-sixth as large as that which occurred in 1943. Spring host plant conditions are unfavorable for leafhopper breeding in most portions of the southern breeding grounds. The acreage of host plants is only about one-third that of 1943. In the local breeding areas of northern Utah, a light population of leafhoppers entered the winter under unfavorable conditions. The condition and stand of spring host plants in the uncultivated areas in most cases is unfavorable. A light leafhopper movement is to be expected from some of the local areas. The spring movement to central and northern Utah cultivated districts under favorable conditions, is expected to be light. It must be emphasized that this statement is based upon present conditions. The movement of the leafhoppers into the cultivated districts of central Utah and western Colorado is expected to start by mid-April. The abundance of the population engaged in this movement will depend upon unpredictable weather fluctuations during the next month which affect the development of the beet leafhopper and its host plants. Experience has shown when an early spring follows a mild winter it usually advances the date of beet leafhopper movement from the uncultivated breeding areas to the cultivated districts. On the other hand, a late spring with excessive rainfall delays the date of the movement. For these reasons a later statement will be issued on beet leafhopper conditions. This will be based on additional information obtained from surveys now in progress.

This information was derived from late-winter surveys of distant breeding areas made in cooperation with states of Utah, Nevada, California and Arizona and on early-spring surveys in local breeding areas of northern Utah. (Dorst, Knowlton).

YELLOW-STRIPED ARMYWORM (*Prodenia ornithogalli*) - TEXAS - Light to medium on onions near Floresville, Wilson County. (Davis).

SEED-CORN MAGGOT (*Hylemya cilicrura*) - GEORGIA - Heavy infestation in parsley seed in Fulton County, Feb. 25. (Beckham). OKLAHOMA - First eggs of season found on spinach Feb. 26. (Walton, Kantack).

PINK BOLLWORM (*Pectinophora gossypiella*) - FLORIDA - Larvae, pupae and adults, average about 3 per plant, in okra on Plantation Key. (Conn, March 1).

SPIDER MITES - VIRGINIA - Populations on strawberries about normal for season in Norfolk area. Light but well distributed. (Brubaker, Greenwood, Hofmaster).

VEGETABLE WEEVIL (*Listroderes costirostris obliquus*) - FLORIDA - Very light larval infestation in tobacco bed in Gadsden County. (Guthrie, May).

COTTON INSECTS

Boll weevil Survival Counts, Tallulah, Louisiana: Trash examination in Madison Parish completed March 4. Number of live weevils per acre found per point ranged from 0 to 3,050 in 1954, with average of 1,1 13. This average was about 1.4 times the average found during the past 18 years. There were only five years (1945, 1949, 1950, 1951 and 1953) in which a greater number was found than in 1954. The number found this spring was 21 percent of the number found in hibernation last fall. Average survival this year was approximately one-half of average survival during past 17 years. (Gaines).

CUTWORMS - TEXAS - Medium to light infestation on cotton, watermelons, cantaloups in the lower Valley. (Griffith).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TEXAS - Evidence of broods has disappeared from infested spots previously reported in East Texas. (Young, Feb. 19).

A STELLATE SCALE (*Vinsonia stellifera* (Westw.)) - FLORIDA - This scale, new to Florida, was found in Miami area during September 1953. Specimens on orchid leaves were submitted by C. E. Shepard, who made the discovery, and identification was made by G. B. Merrill. Since this scale is known to attack orchids and other ornamentals, citrus and mangoes, all of commercial importance in Florida, eradicative measures were started immediately. (Dekle).

TURPENTINE BEETLES (*Dendroctonus* spp.) - TEXAS - Fairly large populations went into the winter in East Texas. Without control measures, a problem expected next summer. (Young, Feb. 19).

TERMITES (prob. *Reticulitermes virginicus*) - FLORIDA - Winged stages infesting some homes in Sanford area. (Wilson).

INSECTS AFFECTING MAN AND ANIMALS

CATTLE GRUBS - SOUTH CAROLINA Very numerous in Anderson County. Apparently worse than for several years. (Goodwin, Feb. 20). MARYLAND - Of 82 animals examined in Cecil County, 5 found infested with 1 to 2 grubs each. (U. Md., Ent. Dept.). KANSAS - From 2 to 100 percent infestation in a few herds checked. (Matthew). OKLAHOMA - Heel fly activity noted in northern and central areas. First report Feb. 15, which is considered very early. (Stiles).

HORN FLY (*Siphona irritans*) - TEXAS - Attacking cattle very heavily over widespread area in Jasper and Woodville areas. Severe infestation for this time of year and will probably cause screw-worms early. (McGregor). FLORIDA - Adults, averaging 5 per animal on 50 cows, found on farm in Gadsden County. Horn flies increasing despite two heavy frosts. (Guthrie, May).

CATTLE BITING LOUSE (*Bovicola bovis*) - LOUISIANA - Herd of cattle heavily infested in Livingston Parish. (Cockerham).

CATTLE LICE - OKLAHOMA - Populations in northwestern and southeastern Oklahoma very heavy in many herds. (Bower).

TABANIDS - OKLAHOMA - Overwintering larvae lower than normal for time of year in north central area. (Schomberg).

STORED PRODUCT INSECTS

A DERMESTID (*Trogoderma granarium*) - CALIFORNIA - Infestation in Imperial County has been extremely heavy and presents a real control problem. (Armitage).

BROWN SPIDER BEETLE (*Ptinus hirtellus*) - TEXAS - Medium local infestation in household furnishings near Clarksville. (Randolph).

MISCELLANEOUS INSECTS

ARGENTINE ANT (*Iridomyrmex humilis*) - MISSISSIPPI - Specimens received for first time from Camden, Madison County. (Hutchins).

BENEFICIAL INSECTS

LADY BEETLES (*Hippodamia convergens* and *Ceratomegilla fuscialabris*) - LOUISIANA - Effectively reducing cowpea aphid infestation on common vetch in Rapides Parish. (Burns).

RECENT IMPORTANT INTERCEPTIONS AT PORTS OF ENTRY

The interception of the following introduced foreign plant pests is a reminder of their continuing threat to the agriculture of this country through possible reintroduction and spread to areas where they are not known to occur.

PINK BOLLWORM (*Pectinophora gossypiella*) - Larvae in cotton seed in cargo at Roma (Chapman), and in cotton bolls in baggage at Laredo (Volle) from MEXICO.

SWEET POTATO WEEVIL (*Cylas formicarius elegantulus*) - Larvae, pupae and adults in sweet potatoes in baggage from MEXICO at Laredo (Reuthinger, Volle).

EUROPEAN CORN BORER (*Pyrausta nubilalis*) - Larvae in string beans in ships' stores from JAPAN at Seattle (Nelson).

MEXICAN FRUIT FLY (*Anastrepha ludens*) -Larvae in oranges from MEXICO in airplane quarters at Brownsville (Fink) and in baggage at Laredo (Coleman, Randolph, Davis, Weedmark, Noel).

SUMMARY OF INSECT CONDITIONS - 1953

OREGON

Reported by J. E. Davis

Cereal and Forage Insects: EUROPEAN CORN BORER (*Pyrausta nubilalis*) - An intensive survey throughout State failed to reveal any corn borers in Oregon. CORN EARWORM (*Heliothis armigera*) infestation was heavy in eastern counties but light in the western part of State. A NITIDULID (*Meligethes seminulum*) infestation was very heavy in Willamette Valley; losses especially heavy in clover fields. CLOVER HAYWORM (*Hypsopygia costalis*) - No damage reported or observed but adults are appearing in increasing numbers in bait traps each year. Present population in southern and eastern areas indicate insect might become a menace to hay production. GRASSHOPPERS plentiful in scattered areas.

Fruit and Other Tree Insects: PEAR PSYLLA (*Psylla pyricola*) eggs were laid in enormous numbers early spring in Jackson County but control was excellent and no damage was reported in well-cared for orchards. CHERRY FRUIT FLY (*Rhagoletis cingulata*) control was good in all sections. CODLING MOTH (*Carpocapsa pomonella*) numbers in bait traps appeared to be less in 1953 although first emergence was earlier than usual. FILBERTWORM (*Melissopus latiferreanus*) - No increase noted over previous year. ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - No specimens found or reported in State during last three years. FILBERT LEAF ROLLER (*Archips rosana*) - Many egg masses in filbert orchards early spring. Heavy flight of adults in most orchards throughout summer. OBLIQUE-BANDED LEAF ROLLER (*Archips rosaceana*) caused severe damage to apple tree foliage in a few areas. PEACH TWIG BORER (*Anarsia lineatella*) infestation about normal. FALL WEBWORM (*Hyphantria cunea*) infestation heavy, especially in walnut trees. AN OAK GALL (*Plagiotrichus chrysolepidicola* var.) -Heavy infestation in some areas in Willamette Valley and many limbs on Oregon white oak (*Quercus garryana*) killed.

Vegetable and Ornamental Plant Insects: ONION MAGGOT (*Hylemya antiqua*) - Heaviest infestation in parts of Labish area since onions have been grown there. In other onion areas infestation was about normal. WESTERN SPOTTED CUCUMBER BEETLE (*Diabrotica undecimpunctata*) was very plentiful in the Willamette Valley, especially noticeable in corn fields in August. Also nursery inspectors report a heavy infestation in nurseries. THRIPS collections indicate normal infestation. GREEN HOUSE WHITEFLY (Trialeurodes vaporariorum) - Nursery inspectors noted heavy infestation this year. EUROPEAN EARWIG (Forficula auricularia) - Many reports of heavy infestation. Survey along the Oregon coast indicates the establishment of the earwig parasite, Bigonicheta setipennis, in several localities. TENT CATERPILLARS infestation heavy in nurseries.

Livestock Insects: SHEEP BITING LOUSE (Bovicola ovis) heavily infested sheep in one flock.

NORTH CAROLINA

Reported by G. D. Jones

The protection of North Carolina's billion dollar agricultural industry from insects was made difficult during 1953 by drought and weather extremes. Some 150 major insect pests took out a big share totalling perhaps 125 million dollars in losses due to damage and reduced quality of agricultural products. The dry weather caused serious losses and often the farmer "saw his crop wither even though he had controlled the insects".

BOLL WEEVIL (Anthonomus grandis) heads the list of the worst pests for 1953 and estimates show that it alone caused approximately $25,000,000 loss to cotton growers. The insect survived the rather warm winter in large numbers and because of extremely high temperatures in late May and early June, appeared in large numbers in cotton fields early in the season. The number of weevils reminded growers of 1950 but infestation generally proved not as severe. More farmers, however, than ever before started controls in June and brought the infestation down. The weevil did cause serious losses, nevertheless, on many farms causing some growers to not harvest crop. Rains and showers were spotty thus making for much variation in fields in each county.

HORNWORMS (*Protoparce spp.*) on tobacco were fairly numerous early in the season but later broods failed to show up;therefore, this pest was not the problem it was in 1952. Many growers made no insecticidal applications. TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) was very abundant during dry weather in May and June as were TOBACCO BUDWORMS, (*Heliothis armigera* and *H. virescens*). Larvae of the flea beetle caused widespread losses to young transplants in the upper Piedmont fields and especially where drought was so severe during the entire season. More insecticides than ever before were used to control this pest and the budworms.

GRASSHOPPER infestations failed to develop in the mountain counties. ARMYWORM (*Pseudaletia unipuncta*) appeared in a few fields in the mountain countiesand in one area in the eastern part of the State. Outbreak numbers were not present, however, some loss in individual fields before treatments could be made.

Stored grain pests were extremely abundant in stored wheat in many counties during the fall. RICE WEEVIL, CADELLE, LESSER GRAIN BORER, and INDIAN-MEAL MOTH were extremely active.

Soil pests, especially WIREWORMS, were serious on corn, peanuts, potatoes and other crops.

PLUM CURCULIO (*Conotrachelus nenuphar*) and ORIENTAL FRUIT MOTH (*Grapholitha molesta*) were the worst pests in orchards but when a good spray program was followed insect damage was held to a minimum.

CORN EARWORM, FLEA BEETLES, MEXICAN BEAN BEETLE, and CABBAGEWORMS were the most serious pests on vegetable crops.

HOUSE FLY (*Musca domestica*) was very difficult to control around many dairy, hog, and poultry establishments. Many reports of only fair results with residual sprays.

GEORGIA

Reported by: C. R. Jordan, O. I. Snapp
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Cotton Insects: The BOLL WEEVIL (*Anthonomus grandis*) infestation during 1953 was one of the most severe in the history of the State. An intensive control program was necessary to prevent very heavy damage. BOLLWORMS (*Heliothis armigera* and *H. virescens*) caused severe damage in some localities and damage averaged 4 percent injured bolls for State as a whole. COTTON APHID (*Aphis gossypii*) infestations built up to damaging proportions late in the season, particularly in North Georgia. Severe SPIDER MITE (*Tetranychus desertorum* and *T. bimaculatus*) infestations developed in some localities. A heavy COTTON LEAFWORM (*Alabama argillacea*) infestation late in the season defoliated cotton over most of State but caused no damage except in southernmost counties. Despite the severity of insect infestations, a cotton yield considerably above the State average was produced due to the vigorous control program carried out by most farmers.

Tobacco Insects: Larvae of VEGETABLE WEEVIL (*Listroderes costirostris obliquus*) caused damage to tobacco plant beds in Cook and nearby counties. WIREWORMS (species undetermined) did considerable damage to newly-set plantings in many counties, with heaviest damage in Mitchell, Tift, and Candler. STINK BUGS and FLEA BEETLES caused some damage in Candler County. GREEN PEACH APHID (*Myzus persicae*), TOBACCO BUDWORM (*Heliothis virescens*), and TOBACCO HORNWORM (*Protoparce sexta*) infestations were general over the tobacco growing area, but less severe than 1952.

Peanut Insects: LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) caused considerable damage to peanuts in several South Georgia counties, particularly in Worth. Light to heavy infestations of the FALL ARMYWORM (*Laphygma frugiperda*), CORN EARWORM (*Heliothis armigera*), and VELVETBEAN CATERPILLAR (*Anticarsia gemmatilis*) were general. RED-NECKED PEANUTWORM

(*Stegasta bosquella*) was reported from Worth County. Light infestations of SPIDER MITES were general in Worth County.

Cereal and Forage Insects: CORN EARWORM infestations occurred in field and sweet corn, soybeans, and grain sorghum. Late sweet corn in the mountain area was heavily attacked with 99 percent of ears infested, 5 to 6 larvae in some ears. Severe widespread FALL ARMYWORM infestations occurred in field and sweet corn, grain sorghum, millet, Bermuda and other pasture grasses. VELVETBEAN CATERPILLARS injured soybeans in Laurens, Spalding, Henry, Dougherty and Treutlen Counties. LESSER CORNSTALK BORER damaged corn in Brantley and Ben Hill Counties; cowpeas in Ben Hill, Laurens, Washington and Spalding Counties; and soybeans in Laurens and Screven Counties. Light to heavy damage to corn was caused by a BILLBUG (*Calendra* sp.) in Cook, Toombs and Calhoun Counties. A GRASSWORM (*Mocis* sp., prob. *repanda*) caused considerable damage to pasture grasses and small grains in Berrien, Burke and Spalding Counties. SORGHUM WEBWORM (*Celama sorghiella*) injured star millet in Cook County and grain sorghum in Spalding County. Larvae of GREEN JUNE BEETLE (*Cotinis nitida*) attacked the roots of sericea lespedeza and crimson clover in Harris County. CHINCH BUGS (*Blissus leucopterus*) were reported on corn in Clarke, Jackson and Lincoln Counties. A light HESSIAN FLY (*Phytophaga destructor*) infestation was found on wheat in Jefferson County.

A 40-acre field of soybeans in Spalding County was infested with the GREEN CLOVERWORM (*Plathypena scabra*). THREE-CORNERED ALFALFA HOPPER (*Spissistilus festinus*) was found on alfalfa in Spalding County and caused considerable damage to alfalfa on the Plains Substation in Sumter County. APHIDS (prob. *Toxoptera graminum*) caused yellowing of oats in Brooks, Spalding, Dougherty, Mitchell, Colquitt and Ben Hill Counties. Heavy infestations of A CLOVER HEAD WEEVIL (*Hypera meles*) and LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) were found in crimson clover in Spalding, Washington, Butts, Henry, Walton, Oconee, and Morgan Counties. A light infestation was reported from Green County. A moderate infestation of SORGHUM MIDGE (*Contarinia sorghicola*) was present on grain sorghum in Spalding County.

Fruit and Nut Insects: PLUM CURCULIO (*Conotrachelas nenuphar*) infestation generally was considerably less than that of an average year throughout the peach harvesting season. Damage to harvested early peaches from first-generation larvae was reported from one locality. All mid-season and late varieties of peaches were subjected to a second-brood attack. The hibernating population of adults in the Georgia Peach Belt in the fall of 1953 was less than usual. PEACH TREE BORER (*Sanninoidea exitiosa*) was somewhat less abundant than usual, which is believed to be due to an increased effort by peach growers to control this insect especially by the use of trunk sprays. LESSER PEACH TREE BORER (*Synanthedon pictipes*) infestation was generally heavier than an average year, but was reduced to a moderate infestation by late summer. SAN JOSE SCALE (*Aspidiotus perniciosus*) and FORBES SCALE (*Aspidiotus forbesi*) are now very much reduced and at a very low ebb.

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) was not very injurious in 1953 which most likely was due to the early peach harvesting season and the use of new phosphate insecticides. The general infestation was lighter than that of an average year. Only 0.3 percent of Sullivan's Elberta peaches examined found infested. No infestation found in Hiley peaches examined. A MEASURINGWORM (Geometridae) was much more abundant than usual early in the season, feeding on peach foliage, but left peach trees when vegetation became heavy in orchards. EASTERN TENT CATERPILLAR (*Malacosoma americanum*) appeared as early as March 24, but was of only average abundance throughout season. FALL WEBWORM (*Hyphantria cunea*) also appeared earlier than usual, but the numbers were not greater than usual. COTTONY-CUSHION SCALE (*Icerya purchasi*) was abundant on a property at Perry.

HICKORY SHUCKWORM (*Laspeyresia caryana*) infestation was heavy on the Mobile variety of pecan trees at Fort Valley. Infestations of the PECAN WEEVIL (*Curculio caryae*) were light to moderate in the Griffin and Fort Valley areas. BLACK PECAN APHIDS (*Melanocallis caryaefoliae*) developed into heavy infestations in many orchards. WALNUT CATERPILLARS (*Datana integerrima*) caused some defoliation. PECAN LEAF CASEBEARER (*Acrobasis juglandis*) overwintering larvae caused defoliation in some orchards in Dougherty and Mitchell Counties. PECAN NUT CASE BEARER (*Acrobasis caryae*) lightly infested small pecan nuts in the Albany area in June. APPLE MAGGOT (*Rhagoletis pomonella*) infested apples and cultivated blueberries in the North Georgia apple area. Heavy infestations of PERIODICAL CICADA (*Magicicada septendecim*) occurred in some apple orchards. ORANGE-DOG (*Papilio cresphontes*) infested orange trees in Brunswick.

Vegetable Insects: BLISTER BEETLES (*Epicauta* spp.) caused severe defoliation of Irish potatoes, tomatoes, and lima beans in Spalding and Taylor Counties. CABBAGE MAGGOT (*Hylemya brassicae*) caused moderate damage to cabbage plants in Cook and Rabun Counties. Light infestations of the COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) were reported on Irish potatoes in Dougherty, Rabun and White Counties and on tomatoes in Tift, Irwin and Ben Hill Counties. Heavy infestations of HORNWORMS (*Protoparce* spp.) caused severe defoliation of pimento peppers in Ben Hill County. LEAF-FOOTED BUG (*Leptoglossus phyllopus*) caused wilting of potatoes and beans in Union County. General infestations of MEXICAN BEAN BEETLE (*Epilachna varivestis*) appeared on beans over State and very heavy late infestations on all beans and cowpeas developed in the mountain area. MILLIPEDES - Heavy infestation tunnelling in sweet potatoes in Atlanta. A heavy infestation of the ONION MAGGOT (*Hylemya antiqua*) was found in Irwin County. Infestations of the PICKLEWORM (*Diaphania nitidalis*) were heavy in summer squash in Spalding County. SEED-CORN MAGGOT (*Hylemya cilicrura*) damaged snap beans in Treutlen County. SWEET-POTATO HORNWORM (*Agrius cingulatus*) defoliated sweetpotatoes in Crisp County. TOMATO FRUITWORM (*Heliothis armigera*) caused injury to tomato fruit in Tift County. Light to heavy damage by VEGETABLE WEEVIL (*Listroderes costirostris obliquus*) to turnips in Tift, Treutlen, Jasper, Dougherty, and Spalding Counties; and moderate damage to spinach in Thomas County. COWPEA CURCULIO (*Chalcodermus aeneus*) caused light to moderate damage to field peas in Spalding County.

Forest and Shade Tree Insects: Severe damage to pines by BLACK TURPENTINE BEETLE (*Dendroctonus terebrans*) in a large area of Coffee County. NANTUCKET PINE MOTH (*Rhyacionia frustrana*) caused light damage to 20 acres of young pines in Jasper County and heavy damage to groves in Clarke and Jefferson Counties. Bark beetles (*Ips* sp.) infested 10 acres of pines in Jasper County. A WEEVIL (*Pachylobius picivorus*) girdling and eating holes in trunks of 8 month old pine transplants. EASTERN TENT CATERPILLARS infested apple, wild cherry, elm, plum, and peach trees in Jasper County and wild cherry in Fulton and DeKalb Counties. ELM LEAF BEETLE (Galerucella xanthomelaena) infestations were common in North Georgia. WOOLLY ALDER APHID (Prociphilus tessellatus) was found infesting maple shade trees in Clarke, Elbert, Polk and Calhoun Counties. MIMOSA WEBWORM (Homadaula albizziae) caused considerable defoliation of mimosa in Athens and Griffin. BLACK BLISTER BEETLES (Epicauta pennsylvanica) defoliated mimosa trees in Clarke County.

Insects of Ornamental Plants: AZALEA CATERPILLAR (Datana major) completely defoliated azalea plants in Burke County. AZALEA LACE BUG (Stephanitis pyrioides) infestations were heavy on azalea in North Georgia. Heavy infestations of EASTERN TENT CATERPILLAR damaged roses heavily in Atlanta. BAGWORM (Thyridopteryx ephemeraeformis) damaged arborvitae over much of State.

Stored Product Insects: Insect infestations in general were widespread and caused considerable damage unless control mesures were applied. RICE WEEVIL (Sitophilus oryza) caused severe damage to grain stored on the farm. A very heavy infestation of CIGARETTE BEETLE (Lasioderma serricorne) developed in 41,000 one hundred pound bags of cottonseed meal in storage in Athens. ANGOUMOIS GRAIN MOTH (Sitotroga cerealella) caused heavy damage to surface layers of stored oats. INDIAN-MEAL MOTH (Plodia interpunctella) , SAW-TOOTHED GRAIN BEETLE (Oryzaephilus surinamensis), Ephestia spp., and Tribolium spp. damaged stored peanuts.

SOME OF THE MORE IMPORTANT INSECTS FOR 1953

ARIZ.	Lygus bugs	Boll-worms	Mites	Aphids	Cabbage looper	Stink bugs	Thrips	Honey bees	House flies	Leaf-hoppers
DEL.	Corn earworm	European corn borer	Colorado pot. beetle	Imp. cabbage-worm	Spotted cuc. beetle	Cabbage looper	Pot. leaf-hopper	Corn sap beetle	Pea aphid	Army-worm
GA.	Boll weevil	Boll worm	Rice weevil	Tobacco budworm	Lesser corn-stalk borer	Plum curculio	White-fringed beetles	Sweet pot. weevil	Fall armyworm	Peach tree borer
IND.	Army-worm	Cut-worms	Spittle-bugs	Pot. leaf-hopper	Termites	Grass-hoppers	Corn ear-worm	Flea beetles	Horn fly	
KANS.	Fall army-worm	Corn leaf aphid	Corn ear worm	Two-spotted spider mite	Termites (*R. flavipes*)	House fly	European red mite	Codling moth	W. corn rootworm (*D. virgifera*)	Eur. corn borer
LA.	Corn earworm	Boll weevil	Rice weevil	Sugarcane borer	Termites	House fly	Fall armyworm	Horn fly	Cotton aphid	S. pot. weevil
MASS.	Gypsy moth	Codling moth	Plum curculio	Apple maggot	Eur. corn borer	Corn earworm	Cabbage-worms	House flies	White pine weevil	Aphids
MISS.	Boll weevil	Boll-worm	Fall army-worm	Plum curculio	Army-worm	Oriental fruit moth	Screw-worm	White-fringed beetles	S. pot. weevil	Spider mites
MO.	Grass-hoppers	Corn earworm	Cutworms	Army-worm	House fly	Termites	Codling moth	Seed corn maggot	Bean leaf beetle	Ang. gr. moth
MONT.	Alfalfa weevil	Grass-hoppers	Wheat stem sawfly	Cattle grub	Cattle lice	Mosquitoes	Cutworms	Wire-worms	Lygus bugs	Bt. web-worms
NEV.	Grass-hoppers	Mormon cricket	Alfalfa weevil		Cattle grubs	Flies (horn, house, stable)	Lice (cattle, hog)	Thrips	Harv. ant	Lygus bugs
N. J.	Two-spotted spider mite	Corn ear-worm	Pot. leaf-hopper	Eastern field wireworm	Pea aphid	Codling moth	Plum curculio	Meadow spittlebug	6-spotted leafhopper	Seed-corn mag.
N. MEX.	Grass-hoppers	Horn fly	Lygus bugs	Cotton aphid	Boll-worms	Cattle grub	Mites	Thrips	Eartick	Cattle lice
N. C.	Boll weevil	Tobacco flea beetle	Tobacco budworm	Tobacco hornworm	House fly	Corn earworm	Oriental fruit moth	Termites	Rice weevil	Ang. gr. moth
OHIO	Pot. leaf-hopper	Meadow spittlebug	Eur. corn borer	Army-worm	Corn earworm	Eur. red mite	two-spotted mite	Pot. flea beetle	White grubs	Clov. root borer
PA.	House fly	Meadow spittlebug	Seed & root maggots	Biting flies	Pot. leaf-hopper	Plum curculio	Wire-worms	Eur. corn borer	Cut-worms	Flea beetles
S. DAK.	Grass-hoppers	Eur. corn borer	Mosquitoes	Cut-worms	Flies (Horn, & stable)	Sweetclover weevil	Pot. leaf-hopper	Lygus bugs	Wheat stem mag.	House fly
TENN.	Army-worms	Corn earworms	Boll weevil	Grass-hoppers	Seed corn maggot	Stored gr. insects	Eur. corn borer	Var. oak leaf cat.	Blister beetles	Horn flies
WASH.	Spider mites	Codling moth	Lygus bugs	Corn earworm	*Rhagoletis* on cherries	Cabbage maggot	Aphids	Pea weevil	*Brachyrhinus* spp.	True- False wireworms
W. VA.	Corn earworm	Pot. leaf-hopper	Ang. gr. moth	Codling moth	Mex. bean beetle	Japanese beetle	Meadow spittlebug	Pot. flea beetle	corn flea beetle, Periodical cicada	Army-worm
ORE.	Codling moth	Cherry fr. fly	Filbert moth	Pea weevil	Pea aphid	Potato flea beetle	Onion maggot	Lygus bugs	Spider mites	W. sptd. cucumber beetle

These lists were submitted by the State Clearing offices after discussion and consultation with various entomologists.